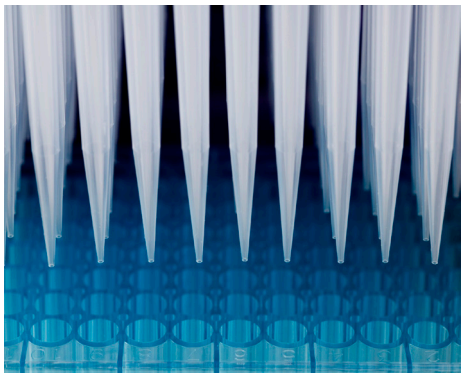
IMPERIUM SYSTEMS

providing solutions for the biotechnology industry...

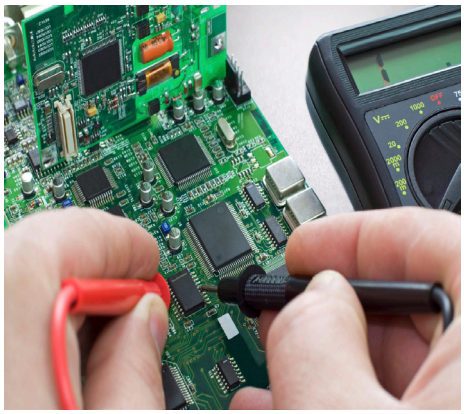
Imperium Systems provides specialist and bespoke electrical, software and industrial process control solutions to customers across the UK.

From control panel design and manufacture to working on (PLC) programmable logic control systems, (HMI) human machine interface panels and (SCADA) supervisionary control and data acquisition solutions, Imperium Systems provides a bespoke solution suited to each customer's needs.



Biochemical controls

Gen-Probe (formerly MLT), is a biotechnology company whose technology was historically used in the clinical diagnostic market. Gen-Probe is now working in industry as a result of developing innovative tests for the identification and monitoring of environmental pollutants. The company asked Imperium Systems to investigate the reasons why problems were occurring on a scale and pump system at their laboratory in Cardiff.



Diagnostics

Diagnostic tests revealed that the scale and pump system appeared to have problems maintaining the correct fill levels when it was asked to change between small and large fill quantities.

Upon investigating the pump's electronic functions, tests revealed that this was due to an inconsistency in pressure levels when it made the switch between large and small fills.



Circuit Boards

In order to remove the problem, Imperium Systems needed to re-wire the circuit boards for the pumps. In doing this, they were able to make the electronics function correctly, maintain the correct levels of pressure and minimise any difference in fill levels, regardless of what quantities were being asked of the machine.

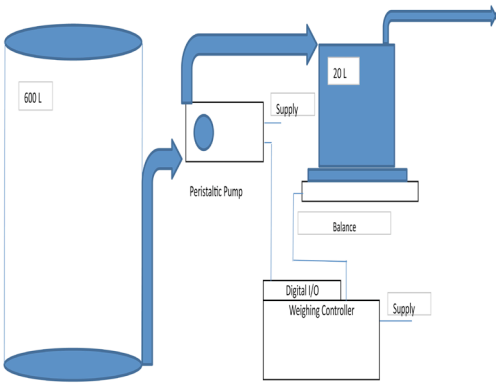
Team Work

Working with all members of the team at Gen-Probe, from Managers to Laboratory Technicians, Imperium was also able to run trial processes on the machine prior to set-up in order to ensure it worked quickly and efficiently from the start.

Improvements

In addition to fixing the problem, Imperium were also able to integrate an alarm function to the machine warning operators of any potential problems before they arose.

Fluid Management System



How it Works

- The weigh controller via programmable settings is set to switch a relay or solid state contact from either normally open, or normally closed, in order to control the peristaltic pump state on and off .
- A typical setting would be for the pump to start at the weight equal to 15 litres and stop at the weight equal to 20 litres of product.
- This would ensure the 20 litre container had the correct amount and head pressure of product to run the bottling line at all times.

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